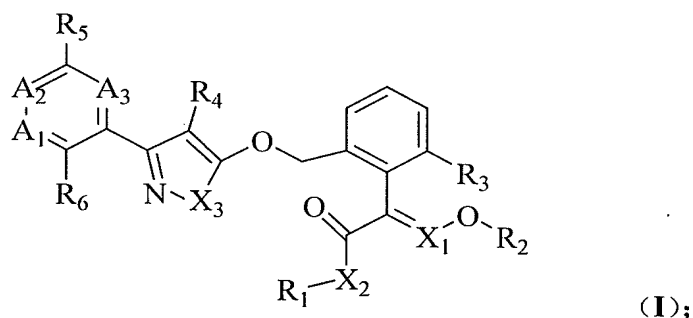


## CLAIMES

1. A substituted azole compounds of formula (I):



wherein:  $X_1$  is selected from CH or N;  $X_2$  is selected from O, S or  $NR_7$ ;  $X_3$  is selected from O, S or  $NR_8$ ;

$A_1$  is selected from N or  $CR_9$ ;  $A_2$  is selected from N or  $CR_{10}$ ;  $A_3$  is selected from N or  $CR_{11}$ ; and if selected from N, only one of  $A_1$ ,  $A_2$  or  $A_3$  is selected from N;

$R_1$ ,  $R_2$  may be the same or different, selected from H,  $C_1$ - $C_{12}$ alkyl or  $C_1$ - $C_{12}$ haloalkyl;

$R_3$  is selected from H, halo,  $C_1$ - $C_{12}$ alkyl,  $C_1$ - $C_{12}$ haloalkyl or  $C_1$ - $C_{12}$ alkoxy;

$R_7$  is selected from H or  $C_1$ - $C_{12}$ alkyl;

$R_8$  is selected from H,  $C_1$ - $C_{12}$ alkyl;  $C_1$ - $C_{12}$ haloalkyl;  $C_1$ - $C_{12}$ alkoxycarbonyl or  $C_1$ - $C_{12}$ alkoxycarbonyl  $C_1$ - $C_{12}$ alkyl;

$R_4$ ,  $R_5$ ,  $R_6$ ,  $R_9$ ,  $R_{10}$  and  $R_{11}$  may be the same or different, selected from H, halo,  $NO_2$ , CN,  $CONH_2$ ,  $CH_2CONH_2$ ,  $CH_2CN$ ,  $C_1$ - $C_{12}$ alkyl,  $C_1$ - $C_{12}$ haloalkyl,  $C_1$ - $C_{12}$ alkoxy,  $C_1$ - $C_{12}$ haloalkoxy,  $C_1$ - $C_{12}$ alkylthio,  $C_1$ - $C_{12}$ alkylsulfonyl,  $C_1$ - $C_{12}$ alkylcarbonyl,  $C_1$ - $C_{12}$ alkoxy $C_1$ - $C_{12}$ alkyl,  $C_1$ - $C_{12}$ alkoxycarbonyl,  $C_1$ - $C_{12}$ alkoxycarbonyl $C_1$ - $C_{12}$ alkyl,  $C_1$ - $C_{12}$ haloalkoxy $C_1$ - $C_{12}$ alkyl, groups may be substituted by any other groups: amino $C_1$ - $C_{12}$ alkyl, aryl, heteroaryl; aroxy, aryl $C_1$ - $C_{12}$ alkyl, aryl $C_1$ - $C_{12}$ alkoxy, heteroaryl $C_1$ - $C_{12}$ alkyl or heteroaryl $C_1$ - $C_{12}$ alkoxy;

and stereoisomer.

2. The substituted azole compounds according to the claim 1, characterized in that wherein general formula (I):

$X_1$  is selected from CH or N;  $X_2$  is selected from O, S or  $NR_7$ ;  $X_3$  is selected from O, S or  $NR_8$ ;

$A_1$  is selected from N or  $CR_9$ ,  $A_2$  is selected from N or  $CR_{10}$ ,  $A_3$  is selected from N or  $CR_{11}$ , and if selected from N, only one of  $A_1$ ,  $A_2$  or  $A_3$  is selected from N;

$R_1$ ,  $R_2$  may be the same or different, selected from H,  $C_1$ - $C_6$ alkyl or  $C_1$ - $C_6$ haloalkyl;

$R_3$  is selected from H, halo,  $C_1$ - $C_6$ alkyl,  $C_1$ - $C_6$ haloalkyl or  $C_1$ - $C_6$ alkoxy;

$R_7$  is selected from H or  $C_1$ - $C_6$ alkyl;

$R_8$  is selected from H,  $C_1$ - $C_6$ alkyl;  $C_1$ - $C_6$ haloalkyl;  $C_1$ - $C_6$ alkoxycarbonyl or  $C_1$ - $C_6$ alkoxycarbonyl $C_1$ - $C_6$ alkyl;

$R_4$ ,  $R_5$ ,  $R_6$ ,  $R_9$ ,  $R_{10}$  and  $R_{11}$  may be the same or different, selected from H, halo,

NO<sub>2</sub>, CN, CONH<sub>2</sub>, CH<sub>2</sub>CONH<sub>2</sub>, CH<sub>2</sub>CN, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxyC<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonylC<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkoxyC<sub>1</sub>-C<sub>6</sub>alkyl, groups may be substituted by any other groups: aminoC<sub>1</sub>-C<sub>6</sub>alkyl, aryl, heteroaryl; aroxy, arylC<sub>1</sub>-C<sub>6</sub>alkyl, arylC<sub>1</sub>-C<sub>6</sub>alkoxy, heteroarylC<sub>1</sub>-C<sub>6</sub>alkyl or heteroarylC<sub>1</sub>-C<sub>6</sub>alkoxy.

3. The substituted azole compounds according to the claim 2, characterized in that wherein general formula (I):

X<sub>1</sub> is selected from CH or N; X<sub>2</sub> is selected from O or NH; X<sub>3</sub> is selected from O, S or NR<sub>8</sub>;

A<sub>1</sub> is selected from N or CR<sub>9</sub>, A<sub>2</sub> is selected from N or CR<sub>10</sub>, A<sub>3</sub> is selected from N or CR<sub>11</sub>, and if selected from N, only one of A<sub>1</sub>, A<sub>2</sub> or A<sub>3</sub> is selected from N;

R<sub>1</sub>, R<sub>2</sub> is CH<sub>3</sub>;

R<sub>3</sub> is selected from H or CH<sub>3</sub>;

R<sub>8</sub> is selected from H, C<sub>1</sub>-C<sub>6</sub>alkyl; C<sub>1</sub>-C<sub>6</sub>haloalkyl; C<sub>1</sub>-C<sub>3</sub>alkoxycarbonyl or C<sub>1</sub>-C<sub>6</sub>alkoxycarbonylC<sub>1</sub>-C<sub>3</sub>alkyl

R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>9</sub>, R<sub>10</sub> and R<sub>11</sub> may be the same or different, selected from H, halo, NO<sub>2</sub>, CN, CONH<sub>2</sub>, CH<sub>2</sub>CONH<sub>2</sub>, CH<sub>2</sub>CN, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxyC<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonylC<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkoxyC<sub>1</sub>-C<sub>6</sub>alkyl, groups may be substituted by any other groups: aminoC<sub>1</sub>-C<sub>3</sub>alkyl, phenyl, phenoxy, benzyl or benzyloxy.

4. The substituted azole compounds according to the claim 3, characterized in that wherein general formula (I):

X<sub>1</sub> is selected from CH or N; X<sub>2</sub> is selected from O or NH; X<sub>3</sub> is selected from O or NR<sub>8</sub>;

A<sub>1</sub> is selected from N or CR<sub>9</sub>, A<sub>2</sub> is selected from N or CR<sub>10</sub>, A<sub>3</sub> is selected from N or CR<sub>11</sub>, and if selected from N, only one of A<sub>1</sub>, A<sub>2</sub> or A<sub>3</sub> is selected from N;

R<sub>1</sub>, R<sub>2</sub> is CH<sub>3</sub>;

R<sub>3</sub> is H;

R<sub>8</sub> is selected from H, C<sub>1</sub>-C<sub>3</sub>alkyl; C<sub>1</sub>-C<sub>3</sub>haloalkyl; C<sub>1</sub>-C<sub>3</sub>alkoxycarbonyl or C<sub>1</sub>-C<sub>3</sub>alkoxycarbonylC<sub>1</sub>-C<sub>3</sub>alkyl

R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>9</sub>, R<sub>10</sub> and R<sub>11</sub> may be the same or different, selected from H, Cl, Br, F, NO<sub>2</sub>, CN, CH<sub>2</sub>CN, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonylC<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxyC<sub>1</sub>-C<sub>3</sub>alkyl, C<sub>1</sub>-C<sub>3</sub>haloalkoxyC<sub>1</sub>-C<sub>3</sub>alkyl, substituted aminoC<sub>1</sub>-C<sub>3</sub>alkyl, phenyl or substituted phenyl, phenoxy or substituted phenoxy.

5. The substituted azole compounds according to the claim 4, characterized in that wherein general formula (I):

X<sub>1</sub> is selected from CH or N; X<sub>2</sub> is selected from O or NH; X<sub>3</sub> is selected from O

or NR<sub>8</sub>;

A<sub>1</sub> is selected from N or CR<sub>9</sub>, A<sub>2</sub> is selected from N or CR<sub>10</sub>, A<sub>3</sub> is selected from N or CR<sub>11</sub>, and if selected from N, only one of A<sub>1</sub>, A<sub>2</sub> or A<sub>3</sub> is selected from N;

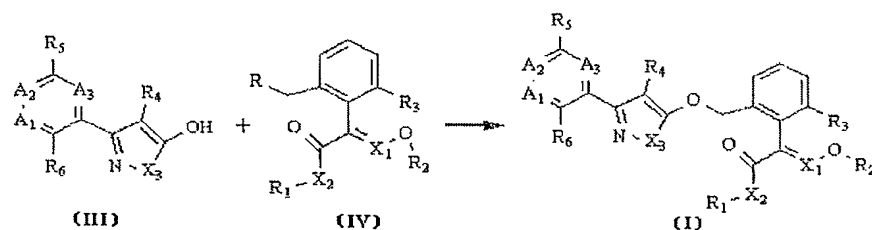
R<sub>1</sub>, R<sub>2</sub> is CH<sub>3</sub>;

R<sub>3</sub> is H;

R<sub>8</sub> is selected from H, C<sub>1</sub>-C<sub>3</sub>alkyl; C<sub>1</sub>-C<sub>3</sub>haloalkyl; C<sub>1</sub>-C<sub>3</sub>alkoxycarbonyl or C<sub>1</sub>-C<sub>3</sub>alkoxycarbonylC<sub>1</sub>-C<sub>3</sub>alkyl;

R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>9</sub>, R<sub>10</sub> and R<sub>11</sub> may be the same or different, selected from H, Cl, Br, F, NO<sub>2</sub>, CN, C<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>haloalkyl, C<sub>1</sub>-C<sub>6</sub>alkoxy, C<sub>1</sub>-C<sub>6</sub>haloalkoxy, C<sub>1</sub>-C<sub>6</sub>alkylthio, C<sub>1</sub>-C<sub>6</sub>alkylsulfonyl, C<sub>1</sub>-C<sub>6</sub>alkylcarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonyl, C<sub>1</sub>-C<sub>6</sub>alkoxycarbonylC<sub>1</sub>-C<sub>6</sub>alkyl, C<sub>1</sub>-C<sub>6</sub>alkoxyC<sub>1</sub>-C<sub>3</sub>alkyl, phenyl or halophenyl, phenoxy or halophenoxy.

6. The preparation of substitute azole compounds according to claim 1, characterized in that wherein general formula (I) can be prepared by reaction of azole compounds containing hydroxyl group having general formula (III) with halomethylbenzene having general formula (IV) at the present of base:



wherein: R is leaving group, such as Cl or Br.

substituted azole compounds and its preparation method and use thereof.

7. A composition of fungicides and insecticides comprises the substituted azole compounds having general formula (I) as an active ingredient, wherein the weight percentage of the active ingredient in the composition is from 0.1% to 99%.

8. According to the claim 1, application of the substituted azole compounds for controlling fungi and insects in plant.

9. According to the claim 7, application of the fungicidal and insecticidal composition for controlling fungi and insects in plant.